DEAS 186-1: 2025

ICS 71.100.40

DRAFT EAST AFRICAN STANDARD

Bathing soap — specification — Part 1: solid

EAST AFRICAN COMMUNITY

Second Edition 2025

Copyright notice

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 074, *Surface Active Agents*.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

This second edition cancels and replaces the first edition (EAS 186-1:2021), which has been technically revised.

EAS 186-1 consists of the following parts, under the general title *Bathing soap — Specification*:

- *Part 1: Solid*
- *Part 2: Liquid*

Bathing soap — Specification — Part 1: Solid

1 Scope

This East African Standard specifies requirements, sampling and test methods for solid bathing soap. It does not apply to carbolic soap or specialty soaps such as, transparent soap, floating soap, liquid soap, beauty soap or sea-water soap.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EAS 377-1, *Cosmetics and cosmetics products — Part 1: List of substances prohibited in cosmetic products*

EAS 377-2, *Cosmetics and cosmetics products — Part 2: List of substances which cosmetic products must not contain except subject to restrictions laid down*

EAS 377-3, *Cosmetics and cosmetics products — Part 3: List of colourants allowed in cosmetic products*

EAS 377-4, *Cosmetics and cosmetics products — Part 4: List of preservatives allowed in cosmetic products*

EAS 377-5, *Cosmetics and cosmetics products — Part 5: Use of UV filters in cosmetic products*

EAS 794, *Determination of the microbial inhibition of cosmetic soap bars and liquid hand and body washes — Test method*

EAS 814 *Determination of biodegradability of surfactants — Test method*

ISO 457, *Analysis of soap — Determination of chloride content — Titrimetric method*

ISO 456, *Surface active agents — Analysis of soaps — Determination of free caustic alkali*

ISO 685, *Analysis of soap — Determination of alkali content and total fatty matter content*

ISO 673, *Analysis of soap — Determination of ethanol insoluble matter*

ISO 862, *Surface active agents — Vocabulary*

ISO 1067, *Analysis of soap — Determination of unsaponifiable, unsaponified and unsaponified saponfiable matter*

ISO 4315, *Surface active agents -- Determination of alkalinity -- Titrimetric method*

3 Terms and definitions *(Mandatory)*

For the purposes of this East African Standard the terms and definitions given in ISO 862 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
soap
product formed by the saponification or neutralization of fats, oils, waxes, rosins or their acids with organic or inorganic bases

3.2
bathing soap
soap which is intended for use in bathing

3.3
toilet soap
bathing soap containing fatty acids and does not contain synthetic surface-active agents

3.4
antibacterial toilet soap
toilet soap containing antibacterial agent(s)

3.5
bathing bar
bathing soap containing fatty acids and/or synthetic surface-active agents

3.6
antibacterial bathing bar
bathing bar containing antibacterial agent(s)

3.7
colouring matter
any safe dye that may be used to colour toilet soap

3.8
free caustic alkali
uncombined caustic alkali present in a soap

3.9
total fatty matter
water-insoluble or ether soluble fatty matter under the specified conditions of test

3.10
antibacterial activity
ability of a bathing soap to inhibit the growth or destroy bacteria and other harmful microorganisms (germs). This activity is commonly found in products designed to prevent infections and promote hygiene, including antibacterial agents, antiseptic agents, and anti-germ formulations.

4 Requirements

4.1 General requirements

4.1.1 Bathing soap shall include the following;

a) Toilet soap

b) Antibacterial toilet soap

c) Bathing bar

d) Antibacterial bathing bar

4.1.2 Bathing soap shall not cause skin irritation and shall have good lathering and cleansing properties.

4.1.3 Perfumes and colouring matter may be added.

4.1.4 Bathing soap shall be firm and of uniform texture and colour and shall be free from objectionable (disagreeable) odour.

4.1.5 Bathing soap shall remain hard, smooth and not crumble when tested in accordance with Annex A.

4.1.6 All the substances used in bathing soap shall comply with the requirements of all parts of EAS 377.

4.1.7 The antibacterial bathing soap shall contain permitted antibacterial agent

4.1.8 The active ingredients used shall be biodegradable when tested according to EAS 814

4.2 Specific requirements

4.2.1 Bathing soap shall comply with the specific requirements specified in Table 1 for toilet soap when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for toilet soap

S/No.	Characteristic	Requirement		Test method
		Toilet soap	Antibacterial toilet soap	
i.	Total fatty matter content, % m/m, min.	76.0		ISO 685
ii.	Content of matter insoluble in ethanol, % m/m, max.	2.0	2.5	ISO 673
iii.	Free caustic alkali content as NaOH, % m/m, max.	0.1		ISO 456
iv.	Free fatty acids content as oleic acid, % m/m, max.	0.3		Annex B
v.	Chlorides content as NaCI, % m/m, max.	0.8		ISO 457
vi.	Unsaponified fatty matter content, % m/m, max.	0.5		ISO 1067
vii.	Antibacterial activity	Not applicable	To pass the test	EAS 794/ASTM E1174/ EN 1276

NOTE 1 Solid toilet soap is liable to lose moisture on storage. The results of analysis in respect to free caustic alkali, free carbonated alkali and matter insoluble in alcohol should be recalculated in relation to the minimum specified total fatty matter by means of the following equation:

$$\text{Corrected result} = \frac{\text{actual result} \times \text{minimum specified total fatty matter}}{\text{actual total fatty matter}}$$

The corrected results should be used to determine whether the product is up to standard.

NOTE 2 Alternative test methods such as ASTM E1174 and EN 1276 factoring log reduction are also accepted to support antibacterial activity. When these test methods are used, the log reduction shall not be less than 99%.

4.2.2 Bathing bars shall comply with the specific requirements specified in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Specific requirements for bathing bars

Sl No.	Characteristic	Requirement		Test method
		Bathing bar	**Antibacterial bathing bar**	
i.	Total fatty matter, % m/m, min.	50.0	50.0	ISO 685
ii.	Lather, mL, min.	200	200	Annex E
iii.	Mush (loss in mass due to mushing on a wet surface), g/30 cm^2, max.	10.0	10.0	Annex F
iv.	Freedom from grittiness	To pass the test	To pass the test	Annex G
v.	Total alkalinity (as NaOH) % m/m, max.	1.0	1.0	ISO 4315
vi.	Rosins, as % of total fatty matter, max.	2	2	Annex H
vii.	Antibacterial activity	Not applicable	To pass the test	EAS 794/ ASTM E1174/ EN 1276

NOTE 1 Solid bathing bar is liable to lose moisture on storage. The results of analysis in respect to free caustic alkali, free carbonated alkali and matter insoluble in alcohol should be recalculated in relation to the minimum specified total fatty matter by means of the following equation:

$$\text{Corrected result} = \frac{\text{actual result} \times \text{minimum specified total fatty matter}}{\text{actual total fatty matter}}$$

The corrected results should be used to determine whether the product is up to standard.

NOTE 2 Alternative test methods such as ASTM E1174 and EN 1276 factoring log reduction are also accepted to support antibacterial activity. When these test methods are used, the log reduction shall not be less than 99%.

5 Packaging

Bathing soap shall be so wrapped as to protect it from damage and excessive loss or gain of moisture.

6 Labelling

Each package shall be legibly and indelibly labelled either in English, Kiswahili or French or combination or any other language as agreed to between the manufacturer and supplier with the following information:

a) name of product as “Toilet soap or bathing bar”

b) an indication of antibacterial activity (where applicable)

c) manufacturer’s name and physical address;

d) batch number or lot number;

e) net content;

f) country of origin;

g) antibacterial agent(s) used (for antibacterial soap/bar);

h) list of ingredients in descending order of quantity; and

e) date of manufacture and best before date.

NOTE: The name, physical address of the distributor/supplier and trade mark may be added.

7 Sampling

Sampling shall be done in accordance with Annex J.

Annex A
(normative)

Texture and stability test

When immersed in 1 L of distilled water for 1 h at 25 °C – 30 °C, toilet soap shall not show signs of disintegration, and when dried at room temperature for 25 h thereafter, it shall not crumble, crack or break.

Annex B
(normative)

Determination of free fatty acids content as oleic acid

B.1 Barium chloride method

B.1.1 Apparatus

B.1.1.1 500 mL conical flask.

B.1.1.2 Reflux condenser to fit the flask.

B.1.2 Reagents

B.1.2.1 Distilled water or water, of at least equivalent purity, free from carbon dioxide.

B.1.2.2 Ethanol, 95 per cent (V/V), free from carbon dioxide and distilled over potassium hydroxide.

B.1.2.3 Ethanol, aqueous solution 60 per cent (V/V), neutralized.

Mix 125 mL ethanol (B.1.2.2), 75 mL distilled water (B.1.2.1) and 1 mL of indicator (B.1.2.7). Neutralize to a violet colour with an aqueous solution of potassium or sodium hydroxide (B.1.2.4). Heat under ref lux for 10 min. Allow to cool to room temperature. Add 1 mL of indicator (B.1.2.7). Neutralize with the hydrochloric acid solution (3.5.6) until the violet colour disappears.

B.1.2.4 Potassium or sodium hydroxide, 0.1 N aqueous solution.

B.1.2.5 Barium chloride, aqueous solution.

Dissolve 10 g of barium chloride dihydrate (BaCl2. 2H20) in 90 ml of distilled water (B.1.2.1). Neutralize with potassium or sodium hydroxide (B.1.2.4) in the presence of indicator (B.1.2.7) until a violet colour appears.

B.1.2.6. Hydrochloric acid, 0.1 N aqueous solution, accurately standardized.

B.1.2.7 Indicator mixture, phenolphthalein-thymol blue, ethanolic solution.

Dissolve 1 g of phenolphthalein and 0.5 g of thymol blue in 100 ml of hot ethanol (B.1.2.2). Filter.

B.2 Procedure

Weigh, to the nearest 0.01 g, about 5 g of toilet soap into a conical flask (B.1.1.1). Add 200 ml of ethanol (B.1.2.3). Connect the reflux condenser (B.1.1.2). Bring to the boil for 10 min. Add an excess of 0.1 N ethanolic potassium hydroxide solution of exactly known normality.

Add to this boiling solution 20 mL of barium chloride solution (B.1.2.5) in small portions shaking thoroughly. Cool with running water to room temperature.

Add 1 mL of the indicator mixture (B.1.2.7). Titrate immediately with the hydrochloric acid solution (B.1.2.6) until the violet colour disappears.

B.3 Expression of results

The free fatty acids as oleic acid, expressed as a percentage (m/m) of potassium hydroxide, is given by the formula;

$$\frac{5.6 \times V \times T}{m}$$

Where

V is the number of millilitres of hydrochloric acid solution (B.1.2.6) used;

T is the exact normality of the hydrochloric acid solution (B.1.2.6) used;

m is the mass, in grams, of the test portion.

Annex E
(normative)

Test for lather volume of bathing bar

E.1 General

Strict attention shall be paid to all details of the procedure in order to ensure concordant results. Particular care should be taken to invert the cylinder exactly as described.

E.2 Outline of the method

A suspension of the material in standard hard water is taken in a graduated cylinder and given 12 inversions under prescribed conditions. The volume of the foam formed is observed after keeping the cylinder for 5 minutes.

E.3 Reagents

E.3.1 Calcium chloride CaCl2.2H2O, AR

E.3.2 Magnesium sulphate MgSO4.7H2O, AR

E.3.3 Distilled water

E.4 Apparatus

E.4.2 100-mL glass beaker

E.4.3 Thermometer of range 0 °C – 110 °C

E.5 Preparation of standard hard water

Dissolve 0.220 g of calcium chloride dihydrate and 0.246 g of magnesium sulphate heptahydrate in distilled water. Dilute to 5 L with distilled water.

NOTE This standard hard water has a hardness of approximately 50 mg/kg calculated as calcium carbonate.

E.6 Sample preparation

Cut away the outer edges of bathing bar using a knife.

Using a stand up type of grater, grate up to 10 g – 15 g of the bathing bar into small chips.

E.7 Procedure

Weigh 1 g of the grated chips bathing bar accurately in a 100-mL glass beaker. Add 10 mL of the standard hard water. Cover the beaker with a watch glass and allow to stand for 30 min. The operation is carried out to disperse the antibacterial bathing bar.

Stir the contents of the beaker with a glass rod and transfer the slurry to a 500-mL graduated cylinder ensuring that not more than 2 mL foam is produced. Repeat the transfer of the residue left in the beaker with further portions of 20 mL of standard hard water ensuring that all the matter in the beaker is transferred to the cylinder.

Adjust the contents in the cylinder to 100 mL by adding sufficient standard hard water. Bring the contents of the cylinder to 30 °C. Stir the contents of the cylinder with a glass rod or thermometer to ensure a uniform suspension.

As soon as the temperature of the contents of the cylinder reach 30 °C, stopper the cylinder and give it 12 complete inversions, each inversion comprising movements in a vertical plane, upside down and vice versa. After the 12 inversions, let the cylinder stand for 5 min. Take the following readings as shown in Figure A.1:

a) foam plus water (V1 mL).

b) water only (V2mL).

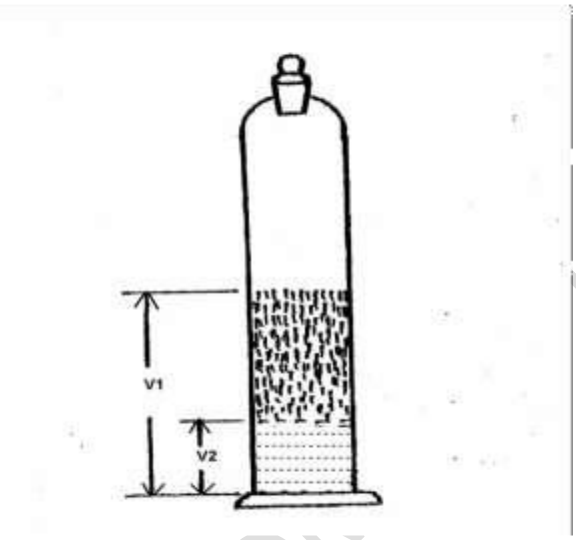

Figure E.1 — Measurement of foam

E.8 Calculation

Lather volume = V1 - V2

where

V1 = Volume, in millilitres, of foam + water;

V2 = Volume, in millilitres of water only.

Annex F
(normative)

Evaluation of the mushing properties of a bathing bar

F.1 Principle

A test piece of defined size is cut from the sample bar to remove harder outer layers. The test piece is preconditioned by giving 18 x 180 degree twists under running water at 25 °C or in a bowl of water at 25 °C. The bar is left for six hours on a piece of fabric that has been wetted and drained of excess water. During the six hours the soap/ cloth are covered to prevent drying. At the end of the test period mush is removed from the test piece face in contact with the cloth. Weight loss from the test piece is expressed as mush per 30 cm^2 of original surface area in contact with the cloth.

F.2 Equipment

F.2.1 For sample preparation

F.2.1.1 Coarse kitchen cheese grater

F.2.1.2 Sharp thin blade knife or carpenters plane

F.2.1.3 Callipers or ruler, to ensure the sample dimensions

F.2.1.4 Other equipment/ materials for the test

Plastic or non-corrodible trays which are suitable sized for the test piece. Plastic soap dishes 7 cm x 11 cm x 2 cm are quite suitable.

Cotton cloth pieces cut and folded to fit as a triple layer inside the trays. Normal, flat weave, cotton sheeting as used for bed sheets will be quite suitable.

F.3 Bar preparation

F.3.1 Three (3) individual bars of a type should be tested. A test piece is cut from each bar. The test piece should if possible have a working face (to be applied to the fabric) of 6 cm ±1 cm x 4 cm ±1 cm.

All bars in a set shall be cut to have the same face size. If the smallest of the range of bars to be tested at a given time is too small to allow a working face within these limits, then all bars should be cut to the maximum size possible from the smallest bar.

The longest axis of the test piece (6 ±1) cm should be from a direction parallel to the longest axis of the original bar sample.

The working face should be a fresh surface from the interior of the bar sample. The face opposite the working face should be identified by making a small hole with a sharp object. This enables the working face to be identified after the preconditioning step.

F.3.2 To cut the bar it is convenient to first trim it to the approximate size using a coarse kitchen cheese grater and then to make the final adjustments to a smooth surface with a sharp thin-bladed knife or carpenters plane. If a plane is used, it is better to move the bar over the plane blade.

F.4 Test procedure

For each test piece

F.4.1 The tray plus triple thickness of cloth is filled with demineralised water. The tray is then held vertically to drain the water from the cloth. The vertical position is maintained until water ceases to run from the dish in a continuous stream i.e. starts to drip.

F.4.2 The area of the working face of the test piece is measured (A).

F.4.3 The working face of the bar is placed onto the damp fabric and then the tray plus soap are covered e.g. with a sealed plastic bag, to prevent water loss.

F.4.4 The covered test piece and holder are maintained at 25^{o}C for 6 h.

F.4.5 The mushed soap test piece is removed from the tray and is weighed (W1).

F.4.6 Mush is removed from the working face of the soap test piece by scraping with the edge of a blunt sided spatula or plastic ruler.

F.4.7 The test piece is reweighed (W2) and the amount of mush removed is calculated as in D.5. The mush is expressed as grams per 30cm^2 of original test piece surface area.

NOTE The procedure for weighing the bar and removing the mush will take some minutes. During that time the remaining soaps will continue to form mush. While this time is not critical for a set of three test pieces from a given product, if more than one product is under test it is advised to stagger the start of the test for the second product. This will give adequate time to complete work on the first set before the 6-hour storage time of the subsequent set is completed.

F.5 Calculation

Weight of mush (grams) W = W1 – W2

Surface area of bar (cm2) A = (width x breadth)

$$\text{Mush} = \frac{W \times 30g}{A} \text{ per } 30\text{cm}^2$$

F.6 Criteria for conformity

The test is done with three (3) separate samples of each product type, and the mean value from three samples is quoted (X). The range of values (R) is quoted as the difference between the highest and lowest values obtained for a given product type.

The sample lot of products shall be declared as conforming to the requirements for this standard if X + 0.6R is less than the maximum value given in Table 2.

Annex G
(normative)

Determination of grittiness in bathing bar

G.1 Procedure

Either

Hold the antibacterial bathing bar under a smooth stream of running water at a temperature of 30 °C and gently rub the two sides of the bar on the palm of one hand for one minute each side.

or

Immerse the soap in a bowl containing 5 L of water at 30 °C and gently rub two opposite bar faces with the palm of one hand for 30 s (15 s per bar face). Remove the bar from the water and continue to gently rub the two opposite bar faces for a further 30 s (15 s per face).

Allow the used bar to dry in the open for 4 hours and examine the surface. A set of 3 samples will be tested for each product.

NOTE 1: Hands will become hydrated and insensitive with prolonged immersion in water. Testers should wait 15 min between testing every 3 sets of products (9 grit tests).

NOTE 2: If using a bowl rather than running water use fresh water after testing every set of 3 samples.

G.2 Criteria for conformity

The performance criteria are:

During manipulation under running water the washing bar will not have a visibly rough surface and will feel smooth to the touch. No gritty particles will be observed on the surface of the dried bar 4 h after the washing test.

Annex H
(normative)

Determination of rosins

H.1 General

H.1.1 Colophonium (commercial rosins) only shall be considered as rosin for the purpose of this standard. The mean equivalent weight of the rosin acid is taken as 346.

H.1.2 The method described in this test gives results approximately one percent higher than the actual amount of rosin present. As a result, the percentage of actual rosin acids present is one less than the percentage of rosin acids found experimentally and hence minus one in the formula.

H.2 Reagents

H.2.1 Dilute Sulphuric Acid — 30 % (w/v) obtained by cautiously adding 16 ml of sulphuric acid, specific gravity 1.84 mL to 70 mL of water.

H.2.2. Beta-naphthalene Sulphuric Acid Solution — C10H7SO3H) — Obtained by dissolving 40 g of the chemical in one litre of chemically pure, absolute methyl alcohol.

H.2.3 Standard Alcoholic Potassium Hydroxide Solution — Approximately 0.2 N in 95 % (v/v) ethyl alcohol or in rectified spirit, accurately standardized. Since alcohol is volatile, frequent restandardization is necessary.

H.2.4 Phenolphthalein Indicator — Obtained by dissolving 1 g in 100 ml of 95 % (v/v) ethyl alcohol.

H.3 Procedure

H.3.1 Dissolve 10 g - 50 g of the sample in about 500 mL of hot water. Add 10 mL - 50 mL of the dilute sulphuric acid to split the bar, keep in steam-bath until the fatty matter separates as a clear layer and siphon off the lower aqueous acid layer. Add 300 ml of hot water, boil gently for a few minutes and siphon off the aqueous layer. Repeat the washing with hot water several times until the wash liquor is free of mineral acids. Complete the acidification and washing in as a short period as possible, keeping the beaker covered to prevent oxidation of the acids. Remove the last traces of water from the fatty acids through one or two thickness of filter paper and dry at 105 ˚C ± 2 ˚C for 45 min - 50 min.

H.3.2 Weigh accurately 2 g of the mixture of fatty and rosin acids into an esterification flask and add 25 mL of beta-naphthalene sulphonic acid solution. Boil gently under a reflux condenser for 30 min, adding a few glass beads to ensure smooth boiling. Cool the contents of the flask and titrate immediately with standard alcoholic potassium hydroxide solution, using 0.5 mL of phenolphthalein indicator. The end point is reached when the pink colour persists for 30 s.

H.3.3 Conduct simultaneously a blank determination with 25 mL of the etherifying agent alone.

H.4 Calculation

H.4.1 Uncorrected rosin

Rosin acids in fatty matter (uncorrected), expressed as percent by mass, shall be calculated as follows:

$$\frac{34.6(S-B)N}{M}$$

where

S is the volume, in millilitres, of standard alcoholic potassium hydroxide solution required for the material,

B is the volume, in millilitres, of standard alcoholic potassium hydroxide solution required for the blank,

N is the normality of alcoholic potassium hydroxide, and

M is the mass in grams, of the material taken for the test.

H.4.2 Corrected rosin

The method described above gives results approximately one percent higher than the actual amount of rosin present. As a result, the actual percentage of rosin acids present is one less than the percentage of rosin acids found experimentally. (Rosin in fatty acids, percent by mass, corrected = Rosin in fatty acids, percent by mass, uncorrected – 1.0.)

NOTE 1 — The mean equivalent mass of the rosin acids is taken as 346.

NOTE 2 — When the quantity of rosin, expressed as percent by mass, is less than 5 in the bars, the results by this method are not so accurate as with bars containing higher rosin content. This method is also liable to give erroneous results with certain types of carbolic soaps containing high boiling tar acids and with other germicidal soaps, for example, soaps containing hexachlorophene.

H.4.3 Liebermann-Storch test

H.4.3.1 General

In all cases where the rosin content is found to be less than 5 %, the actual presence or absence of rosin should be checked qualitatively by the Liebermann-Storch test.

H.4.3.2 Reagents

a) Acetic anhydride — pure

b) Dilute sulphuric acid — relative density 1.53

H.4.3.3 Procedure

Transfer 1 mL to 2 mL of the sample of fatty acids to a test-tube, treat with 5 mL to 10 mL of acetic anhydride and warm on a steam-bath. After cooling, pour 1 mL to 2 mL into a white porcelain dish and allow a drop or two of sulphuric acid to run down the side of the vessel. If rosin is present, a fugitive violet colouration changing to a brownish tinge is immediately produced at the margin of contact of the reagents. Check the test with a sample of fatty acids to which a small amount of rosin has been added.

Annex J
(normative)

Sampling

J.1 Procedure

J.1.1 In a single consignment, all packages (cartons) containing toilet soap cakes drawn from the same batch of production shall constitute a lot. For ascertaining the conformity of the lot to the requirements of this standard, tests shall be carried out on each lot separately. The number of packages to be selected for drawing the sample shall be in accordance with Table J.1.

Table J.1 — Scale of sampling

Number of packages (cartons) in the lot ***N***	**Number of packages (cartons) to be selected** ***n***	**Number of samples**
4 to 15	3	3
16 to 40	4	4
41 to 65	5	2
66 to 110	7	2
111 and above	10	1

J.1.2 The packages shall be selected at random, using tables of random numbers. If these are not available, the following procedure shall be applied:

Starting from any package, count all the packages in one order as 1, 2, 3. N, selecting every k th package,

Where

k is the integral part of N □ n.

J.1.3 From each package thus selected, draw at random an equal number of cakes so as to obtain a total mass of at least 2 kg.

J.2 Preparation of test samples

J.2.1 Composite sample

Weigh each cake separately (including any material that may have adhered to the wrapper), and calculate the average mass. Cut each of the remaining cakes into eight parts by means of three cuts at right angles to each other through the middle. Grate finely the whole of two diagonally opposite eighths of each specimen. Mix the gratings and place in a clean, dry, airtight glass container.

J.2.2 Samples for testing

Immediately after preparation of composite sample (J.2.1), take at one time all test samples required for the tests in 4.2. Weigh out the test sample required for determination of free alkali or acid content, and use it immediately.

Bibliography

[1] EAS 186-1:2021: *Bathing soap — specification — Part 1: solid*

[2] ASTM E1174 *Standard Test Method for Evaluation of the Effectiveness of Healthcare Personnel Handwash Formulations*

[3] EN 1276 *Evaluation of chemical disinfectant or antiseptic for bactericidal activity*